

# DO FAMILY STRUCTURE AND SOCIAL FACTORS INFLUENCE ADULT HEALTH STATUS?

## *An investigation in an urban family practice*

Definitions of health vary widely from narrow biological definitions to approaches which emphasise the social nature of health<sup>1</sup>. According to Larson<sup>2</sup>, the literature on health status and health indicators seems to point to five models, namely the medical, the holistic, the wellness, the environmental and the eclectic model. The medical model defines health as a functional ability, morbidity and mortality; a rather narrow biomedical approach. It is not sensitive to social health and healthy interaction with others and it ignores the social causes of ill-health.

The World Health Organisation (WHO) defines health as "a state of complete physical, mental and social well-being, not merely the absence of disease and infirmity"<sup>2</sup>. Any understanding of health and disease, however, "requires a knowledge not only of disease agents but of those factors that protect the host from these agents or make them more vulnerable to them"<sup>3</sup>.

McDaniel *et al*<sup>4</sup> define a family as a group of people related either biologically, emotionally or legally, and many social characteristics, like marital and parental status, are included in the family structure.

There are three ways in which the different features of family position and status may influence health<sup>5</sup>. Firstly, one's family of origin can influence one's own health. Variables associated with health in this instance include birth order, number of siblings, legitimacy, being brought up by one or both parents, parental death, divorce or remarriage.

Secondly, the status achieved and roles in adult life can influence one's own health. This is referred to as the "family of achievement". Factors which may be important are marital status and history, parental status, living arrangements and employment.

Thirdly, the family position and status of one's children can influence one's own health. Possible influential factors of the next generation include marital, employment and parental status and the history of one's children, as well as their children. These three possible types of influence on health can operate additively or multiplicatively to influence health.

The aim of this study was to establish whether or not the basic relationships between family structure, social factors and adult health status are present in an urban family practice with the wide ethnic diversity characteristic of South Africa.

### Method and patients

The study was conducted in the city of Pretoria in a practice that served all ethnic groups. Roughly half the practice population was White and the rest mainly Black, Indian and Coloured. Many migrant labourers living in hostels or domestic workers' rooms attended the practice.

These patients lived in the vicinity of the practice for most of the year, only visiting their own homes and families occasionally.

A questionnaire to capture information on the variables demonstrated to be important by previous studies (family structure and social factors) was designed. These variables included age, sex, race or ethnic group (White, Black, Coloured or Asian), occupation and occupation of spouse (in the case of married women), marital status, parental status, living arrangements, employment status and educational level. The questionnaires were self-administered by the patients in the waiting or consulting room. Clear instructions on how to complete the forms were given by a trained interviewer before consultation with the doctor.

The doctor discussed the questionnaire with the patient during the consultation to ensure that all questions were clearly understood and appropriately answered. Where difficulty with

the health status instrument was experienced, the doctor administered the charts.

The study population consisted of all patients 18 years of age and older who attended the study practice during the month of June in 1996. Social class or socio-economic group was assessed by evaluating the occupation of the male and single female patients and the occupation of the spouses of married female patients. Parental status was operationalised by indicating the number of children six years of age and younger (young children), between six and sixteen years old (dependent children) and older than sixteen years (older and possibly independent children).

Living arrangements were assessed by firstly ascertaining whether the patient's living arrangements during the working week or school term differed from the arrangements during weekends and school holidays. This was especially important for the assessment of migrant workers. Patients could indicate whether they were living alone, with a spouse, a partner, with parents, with self-supporting children or extended family, with unrelated individuals or with dependent children. Combinations of different living arrangements could also be indicated for both the working week and for weekends or holidays.

Employment status could be indicated by choosing between one of four categories: paid employment, unemployed, housewife or other (eg. student, pensioner, etc.). Educational level was divided into four categories: never attended school, attended school but didn't finish matric, completed matric or obtained post-matric qualifications.

Health status was assessed by including the Dartmouth COOP Functional Health Assessment Charts/WONCA<sup>6</sup> (HAC) in the questionnaire in an effort to measure the patient's subjective opinion on health status based on physical fitness, feelings, daily activities, social activities, change in health and overall health during the preceding two weeks and the degree of bodily pain experienced during the previous four weeks.

Multivariate analysis was utilised to determine the relationships between family structure, social factors and health status. In each case the dependent and independent variables were selected and the mean for each axis of the health status instrument (HAC) was calculated for each independent variable as a function of the dependent variable.

### Results

The questionnaire was administered to 213 patients, of whom all consented to participate in the study, and 202 questionnaires were completed by 137 (67,2%) females and 65 (32,8%) males. The non-responders (n=9) were patients who were too hurried to complete the questionnaire in the consulting room, promising to complete it at home and return it later. The other two non-responders were unable to understand the questionnaire due to language problems and as no interpreter was available at the time, the questionnaire couldn't be completed. The gender distribution for each racial group is presented in Figure 1.

The patients generally found working with the charts easy and enjoyable and they appreciated the additional interest into other aspects of their health. On numerous occasions, as was also found by Nelson *et al*, the charts revealed substantially greater levels of dysfunction than previously recognised, especially with regards to emotional well-being.

It was found that many of the Black patients (regardless of ethnic group) had difficulty in understanding the meaning of the charts. It was easier to administer the charts to these patients after having attended to the presenting problem because patients tended to re-route the chart questions to their present symptoms. Black patients were especially inclined to present with physical

problems only and the charts showed that a surprisingly high proportion of these patients were also suffering from emotional problems.

Many were surprised at being asked questions that did not relate immediately to their presenting symptoms, perhaps indicating that few Black patients usually experience a holistic approach to their health care.

White, Coloured and Asian patients had little difficulty understanding and completing the questionnaire.

The average ratings for each axis of the Functional Health Assessment Chart per race group and gender is presented in Figures 2 and 3.

**Gender and health status**

Females rated their health as being better than males on five of the seven axes of the Health Assessment Charts (HAC). Males rated only their physical fitness and feelings better than females, but both groups rated their change in health as "about the same". Females were of the opinion that their overall health was better than males, as well as experiencing less bodily pain.

**Racial group and health status**

Black males rated their physical fitness and feelings much better than White males, while Asian males regarded themselves as less fit than White males. Daily and social activities, change in health and overall health were rated highest by the Asian males and slightly lower by White males. Black males rated themselves much lower on these four axes. White males reported themselves as experiencing the least pain and Asian males the most.

Because the sample of Asian males was very small, a comparison was drawn between White and Black males and it was found that the White males rated themselves as more healthy on five of the seven axes of the HAC, including overall health.

With regards to physical fitness, Black females rated themselves highest, followed by Coloured, Asian and White females. The daily activities chart was rated highest by Asian females followed by Coloureds, Whites and Blacks. Social activities were rated highest and very similar by White and Coloured females, Blacks slightly lower and Asian females much lower. The change in health score was highest for Black and Asian females, with Coloureds indicating no change and White females rating their health as slightly worse.

Overall health was rated highest by Asian females, lower by Coloureds and Whites and lowest by Black females, while Coloured females rated themselves as experiencing pain the most, followed in decreasing intensity by Black, White and Asian females.

When the two major racial groups were compared, excluding the small numbers of Asian and Coloured females, White females considered themselves as healthier on four of the seven axes of the HAC than Black females.

**Health and socio-economic status**

In the assessment of the association between health and socio-economic status the conventional social class classification was used. (See Table D)

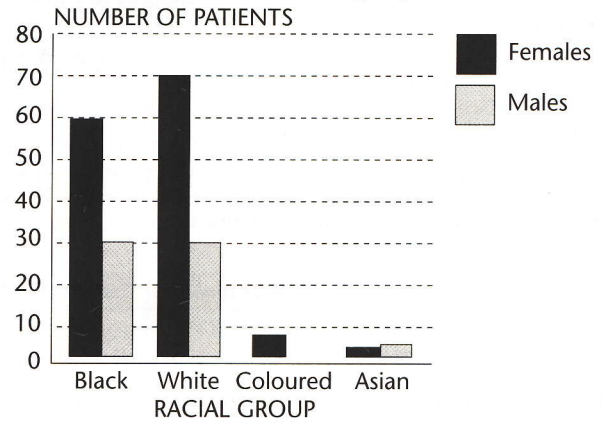
Amongst the male patients physical fitness showed a linear relationship across all social classes with Class I rating themselves as physically the most unfit and Class V the fittest. No clear relationship emerged with regards to feelings, but it seemed that manual workers rated their feelings as slightly better than non-manual workers.

Daily activities produced a curved line when the different classes were compared. Classes I and V rated themselves as most able to perform daily activities, followed by Class II and IV, with Classes IIIa and IIIb least able to perform daily activities.

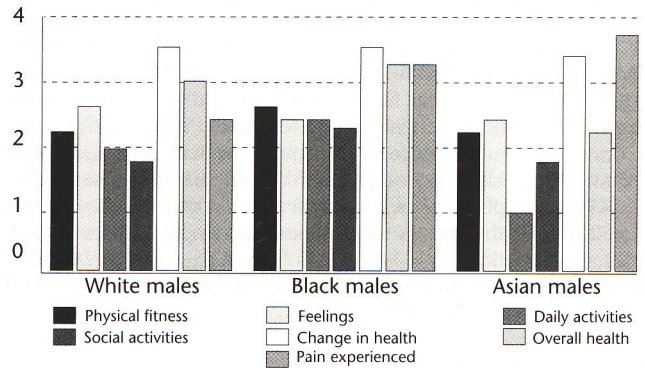
With regards to social activities, non-manual workers rated themselves better than manual workers, with the exception of unskilled workers who rated their social activities as similar to that of non-manual workers.

All classes rated their change in health as being worse, with non-manual workers doing markedly worse than manual workers. Overall health also showed a linear relationship from Classes I to IV, with Class I rating their health better and Class IV worst. Class

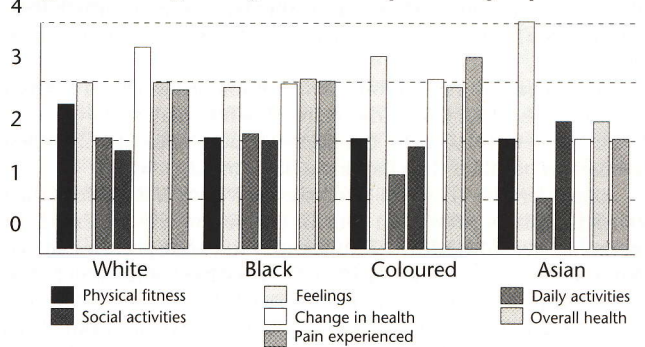
**Figure 1. Gender distribution for racial groups**



**Figure 2. Average rating on HAC axes per racial group: Male patients**



**Figure 3. Average rating on HAC axes per racial group: Female**



V rated their health as the best of all classes. Non-manual classes rated their levels of pain as significantly lower than those of the manual classes.

When the male patients were grouped together into manual and non-manual groups, White and Black manual workers (n = 31) considered themselves less healthy on four of the seven axes of the HAC than non-manual workers (n = 34). White manual workers (n=4) rated their health on five of the seven axes of the HAC as worse than White non-manual workers (n=27). Black manual workers (n = 27) rated their health on six of the seven axes as worse than Black non-manual workers (n=4). Students rated poorly on all seven axes of the HAC.

For married females, the relationship between social class and health status emerged as very similar to that of the males. Physical fitness, daily activities and social activities followed the same patterns as those for males. Change in health was better for all women, except Class III, and pain showed similar trends to males, but Class I experienced significantly less pain than other females. Women from Classes I, II and V rated themselves as feeling emotionally much better than the other women. Overall health declined linearly from Class I to V.

When grouped together, married females with husbands in non-manual occupations (n=43) rated themselves as healthier on five of the seven axes of the HAC than those whose husbands were in manual occupations (n = 20). The married women with husbands in manual occupations were all Black patients.

Socio-economic class		Number of patients	
		Male	Female
Class I	(Professional/higher admin)	14	19
Class II	(Administrative/manager)	14	32
Class IIIa	(Clerical worker)	3	27
Class IIIb	(Skilled manual worker)	8	19
Class IV	(Semi-skilled worker)	19	9
Class V	(Unskilled worker)	4	24

**Table I. No. of patients per socio-economic class**

Group	Level of Education	Male (n=65)	Female (n=137)
I	No formal education	8 (12,3%)	9 (6,6%)
II	Attended school but didn't complete matric	24 (36,9%)	39 (28,5%)
III	Completed matric	12 (18,5%)	40 (29,2%)
IV	Tertiary qualification	21 (32,3%)	49 (35,7%)

**Table II. No. of male and female patients per level of education**

With single females overall health also declined from Class I to Class IV, with Classes IIIb and V indicating better health than the other classes. Physical fitness, feelings and pain assessments demonstrated the same tendency as for males. It was not possible to draw any conclusions from the ratings for daily activities, social activities and change in health due to the fluctuation in the results.

When grouped together, single females in manual occupations (n = 25) rated themselves as healthier than single females in non-manual occupations (n = 49) on six of the seven axes of the HAC, irrespective of the racial group. The four female students showed good health on all axes of the HAC.

**Health and marital status**

Forty-four (67,7%) male patients and 63 (46%) female patients were married. Single males rated themselves as healthier than married men on five of the seven axes of the HAC, including overall health.

With regard to racial group, single White males (n = 14) rated themselves healthier than the married White males (n = 19) on five of the seven HAC axes, but married Black males (n = 23) rated themselves healthier than the single Black males (n = 10).

Single females (n = 74) rated themselves as less healthy than married females (n=63) on four of the seven axes of the HAC, including overall health. With regards to racial group, married White females (n = 30) considered themselves as healthier than single females (n=40) on six of the seven axes of the HAC. In contrast, married Black females (n = 30) considered their health status as worse than single Black females (n = 30).

**Health and parental status**

In analysing the effect of parental status on health, the patients were divided into those with children - parents - (46 males and 90 females) and those without children - non-parents - (19 males and 47 females).

White male non-parents rated themselves as healthier than male parents on all seven axes of the HAC. Because there were only three Black and one Asian male non-parents, no reliable result for them could be achieved. Both White and Black fathers of young children considered themselves as healthier than other fathers on six of the seven axes of the HAC.

When considering both marital and parental status, single fathers rated themselves as less healthy than single non-fathers on four of the seven axes of the HAC. Married fathers also rated their health as worse than men without children. No racial distinction could be drawn because the numbers were too small. When married and single fathers were compared, single fathers rated themselves as healthier than married fathers on four of the seven axes of the HAC. The trend was followed by both White and Black fathers, although the sample sizes were again small. No single Asian or Coloured father completed the questionnaire.

Mothers rated themselves as less healthy than non-parent females on four of the seven axes of the HAC, including overall health. This finding was strongest for Whites, followed by Blacks.

No further racial distinction was possible.

Mothers of young children (< six years) considered their health as worse than the average mother on five of the seven axes of the HAC, including overall health. They also rated themselves as less healthy than women without children on four of the seven axes, including overall health. This effect was strongest among White mothers. Black mothers of young children demonstrated a different trend by rating themselves healthier than the average Black mother on five of the seven axes as well as Black females without children on four of the seven axes of the HAC.

Both married and single females without children, irrespective of racial group, rated themselves as healthier than married and single females with children on four of the seven axes. The single mothers (n =37) considered themselves as healthier than the married mothers (n=57), but here was a racial difference; the 26 Black single mothers rated themselves as healthier than the married mothers on six of the seven axes, and the eleven White single mothers rated their health as worse than the married White mothers on all seven axes .

**Health and level of education**

The number of patients per level of education group is presented in Table II. Men who obtained tertiary qualifications rated themselves as healthiest of the four groups on four of the seven axes of the HAC, including overall health, followed by those males who had completed matric. Men with no formal education considered their health status as poor on five of the seven axes of the HAC. Racial comparison was unreliable.

There was a positive correlation between health and level of education for males, with men rating their health as better with every following level of education.

Women who attended school but didn't complete matric rated themselves as healthiest on three of the seven axes of the HAC, those who had no formal education on two of the seven axes and females who completed matric and those with tertiary education on one axis. No clear association between health and level of education of female patients was detectable.

**Health and employment**

No conclusion on the relationship between employment and health of the male patients could be drawn because only one male patient was unemployed.

The twelve unemployed female patients as well as the eight who indicated their employment as "housewife" rated themselves as healthier than the 119 employed females on five of the seven axes of the HAC, including overall health. Marital status had no influence on the result of the rating.

**Health and living arrangements**

The 52 patients who had living arrangements during weekends and holidays that differed from their living arrangements during the working week or term, rated themselves as healthier than the 150 patients with stable living arrangements on four of the seven axes of the HAC. The majority of the former were Black migrant workers .

For both males and females, patients with differing living arrangements rated themselves as healthier than those with stable living arrangements on six of the seven, and on four of the seven axes of the HAC respectively.

**Conclusions**

In Western literature<sup>1,5,8-10</sup> there is a general consensus that married people experience better health than previously married people, with never married people being intermediate. In this study, married men rated their health status as lower than single men, but married women rated their health status as being better than that of single women.

When considering race, an interesting contrast emerged, with married Black males and single Black females rating their health status as best. Being married seems not to be necessarily associated with the experience of better health status in the patients studied. Being a parent is associated with better health in the Western literature, with the possible exception of parents with young children and single mothers<sup>11,15-21,24</sup>. In this study it was shown that

being a parent is associated with a poor health status experience for both males and females, regardless of marital status or the age of the children.

The effect of socio-economic status on the perceived health status mirrors the trends found in the literature reviewed<sup>11,18,22,25,26</sup>. Increased levels of education had a positive effect on perceived health status for men, which was in contrast with the literature, although it had little or no associated or perceived health status for women, as is found in the literature.

The effect of employment on the perceived health status of males could not be assessed in this study, but in contrast to the literature re-viewed<sup>11,15,16,23,27</sup>, paid employment was associated with poorer perceived health for women, irrespective of marital or parental status.

Although the findings of this study confirmed many of the general trends in the relationship between family structure, social factors and perceived health status found in the Anglophone literature, there were some findings that differed completely from these trends. These differences could not be explained by racial diversity alone.

It is thus concluded that although this study was very limited in size and confined to one urban family practice, it is clear that the associations between family structure, social factors and perceived health status in South Africa may be markedly different from those found in the Western literature and that it would be inappropriate to apply Western trends when assessing the aforementioned relationships in South African medical practice.

More research in family medical practices needs to be performed in order to establish a firm scientific assessment of the relationship between family structure, social factors and perceived health status. ●

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## NETCARE GETS CONTROLLING INTEREST IN CLINIC HOLDINGS

Hospital management company Network Healthcare Holdings Limited ("Netcare") has announced that an agreement has been concluded with the majority shareholder and founder of Clinic Holdings Limited ("Clinics"), Mr Barney Hurwitz, to acquire his controlling interest in that company. Netcare will simultaneously acquire the hospitals held privately by Barney Hurwitz but outside of the Clinics group. The transaction will position Netcare as the largest private hospital group in South Africa.

As an integral part of the acquisition, Netcare has invited various strategic Black Economic Empowerment groups to participate as the shareholders of Netcare. All of these organisations are committed to support and promote the business of Netcare and will play a significant role in the future healthcare plans of the group.

These groups include Kopano Ke Matla (KKM), South African Railways and Harbours Workers Union Investment Holdings (SARHWU Investment Holdings), the National Union of Metal Workers of South Africa (NUMSA), the National Education, Hospital Allied Workers Union (NEHAWU) and the South African Medical and Dental Practitioners Association (SAMDP). Their choosing of Netcare as partners must be regarded as significant.

In combining with Clinic Holdings, Netcare will acquire an enormously valuable infrastructure within Clinic Holdings and will be well positioned to attract managed care contracts and government partnerships.

Netcare intend to immediately implement its vision and management values into Clinic's hospitals and improve its margins, working capital and asset management. The change in management control will focus on a revitalised and dynamic approach based on participative and performance-driven management. The policy of the group is to afford staff the opportunity to participate in ownership through a staff share incentive scheme. Netcare has successfully partnered its doctors by entering into co-operation agreements, one of the essential features for cost containment in the managed care revolution.

On the issue of managing the process of merging the two companies, Dr Jack Shevel, the entrepreneur behind Netcare and CEO of the combined group, feels "there is a wealth of talent to be unlocked in Clinics and we will become the dominant force in the industry".

Given the above analysis and their significant rationale, Netcare believe they are acquiring Clinics on very favourable terms. On completion of the transaction the merged group will have a turnover in excess of R1,6-billion, with projected operating profits of R280-million.

Government is currently reviewing its healthcare policies in South Africa with a view to ensuring that all employees enjoy what has become known as "employer-sponsored" healthcare. Currently less than half of all employees are covered by any form of health insurance, which suggests that enrolment in medical health plans will increase dramatically.

Managed healthcare (MHC) is taking root in South Africa in an effort to curtail spiralling medical inflation and make healthcare more affordable for the emerging market. Dr Shevel believes "MHC is a process and not a product and can only be achieved with the co-operation and support of doctors". Experience from the USA endorses Netcare's philosophy of forming a true partnership with its doctors.

Netcare is the first organisation to introduce shared risk global fees in conjunction with its specialists for over 30 procedures. Global fees cover the entire costs for all services rendered or offered for a specific procedure and they have shown to achieve cost savings of up to 20%. Both Clinics and Netcare enjoy preferred provider arrangements with certain medical aid schemes. The combined network of the hospitals, with the support of over 7 000 doctors, places the new group in an advantageous position to garner further managed healthcare business.

In addition, Netcare has developed a close relationship with the Fedsure Group, which is involved in the funding of healthcare benefits via Fedsure Health. Fedsure will own 25% of the merged group, offering tremendous synergies between Netcare and Clinics and all Fedsure Healthcare divisions. ●